CLAIMS

1. An ion implantation apparatus comprising:

an ion source section for generating ions;

an ion implantation section for implanting said ions generated in said ion source section, in a substrate;

a charged particle generator for generating charged particles having a charge opposite to that of said ions;

a beam guide section having an inlet aperture for accepting said ions from said ion source section, an outlet aperture for delivering said ions into said ion implantation section, a guide tube extending from said inlet aperture to said outlet aperture, and an introducing section having an opening thereof in an internal surface of said guide tube, for introducing said charged particles from said charged particle generator into said guide tube; and

a shield section located between said opening of said introducing section and said outlet aperture inside said guide tube.

2. The ion implantation apparatus according to Claim 1, wherein said shield section comprises a shield surface intersecting with straight lines running from points on a surface specified by said opening of said introducing section to points on a surface of said

substrate to be implanted with the ions, placed in said ion implantation section.

3. The ion implantation apparatus according to Claim 1, wherein said shield section comprises a shield surface extending from the vicinity of the edge of said opening to above said opening.

4. The ion implantation apparatus according to Claim 1, wherein said shield section comprises a shield surface intersecting with straight lines running from points on a surface specified by said opening of said introducing section to points on a surface specified by said outlet aperture of said ion beam section.

5. The ion implantation apparatus according to Claim 2, wherein said shield section comprises said shield surface making an acute angle with the internal wall surface of said guide tube and having a flat plate shape.

6. The ion implantation apparatus according to Claim 2, wherein said shield section comprises a flat plate having said shield surface and placed at an acute angle to the internal wall surface of said guide tube, and a frame member for supporting said flat plate.